



OCTOBER 1994

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B.A.R.G. NEWS

Vol.17 No.6

OFFICIAL NEWSLETTER OF THE BALLARAT AMATEUR RADIO GROUP INC.

WE'LL LOOK OUT FOR YOU
BRAY RACEWAY 29/30 OCTOBER



GOOD
FOOD
COMPANY
BARGAINS
HUNTING
FREE COFFEE
DEMOS



BALLARAT AMATEUR RADIO GROUP INC.

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	KEVIN HUGHES (VK3WN)	PHIL SEDDON (VK3AQM)		
	STAN WIDGERY (VK3SE)			

CLUB STATION

VK3 BML

REPEATERS

VK3RBA (Voice)	146.750 MHz. - Mt. Buninyong.
VK3RBS (Voice)	146.900 MHz. - Smeaton Hill
VK3RPC (Packet)	144.750 MHz. - Mt. Warrenheip.
VK3RBU (Voice)	438.475 MHz. - Mt. Hollowback.
VK3RMB (Beacon)	432.535 MHz. - Mt. Buninyong

ACTIVITIES

CLUB NET: Thursday nights at 8 pm. (8.30 pm during Daylight Saving). Freq: 3.610 MHz +/- QRM.
 2 METRE SCRAMBLE: Sunday Nights at 7.50 pm. Freq: 146.425 to 146.600 MHz. Inc.
 Call back held on VK3RBA 146.750 MHz.

Logs monthly to D. Quirk - P.O. Box 78 - Newstead 3462 (or Meeting) to qualify.

MEETINGS: General Meeting: Last Friday of each month (except December) at 7.30 pm.

Natter Night: 2nd Friday of each month.

Venue: Community Education Centre - Hopetoun St. Ballarat.

FOX HUNTING: As arranged during the year.

PLEASE ADDRESS ALL CORRESPONDENCE to:

The Secretary - BARG Inc.
 Box 1261
 Mail Centre
 Ballarat. 3354

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FROM THE SECRETARY'S DESK



MINUTES OF GENERAL MEETING - 30TH. SEPTEMBER 1994

President Bob VK3BNC welcomes the Members and our Visitor, Peter Hallgarten, to the meeting.

APOLOGIES were accepted on behalf of VK3's DOK, CFB, SE, NIZ, KQG, VU, XEX, FR, KIT, DS, PAP, KQF, NBF.

MINUTES as circulated were confirmed.

CORRESPONDENCE as read was accepted.

TREASURERS REPORT as presented was accepted

CCB/XDQ

CJB/CAZ

KGL/AAP

QSL's Doug reported that 341 cards were received and 96 sent out. Of those sent out only two cards were mis-sorted by the senders. Sorting of cards makes Doug's job much quicker.

Still some QSL activity.

TNX. Doug.

PUBLICITY / NEWSLETTER Norm VK3LBA reported on completion of the following during the month. A flyer / handout for the Hamvention, Free Passes (as requested at August meeting) Prize Certificates for Foxhunting events., Reproduction of Model Rules (Copies available \$3 per copy.)

More articles required for Newsletter.

TECHNICAL Power consumption excesses to be investigated.

Still pagers, and more pagers !!!!! (See article from David VK3YNB) TNX Dick.

NET Good number of check ins and good company.

EDUCATION Format and presentation from Reg. VK3CAZ.

Examinations - 5 candidates for 6 subjects - 50% pass rate.

UPGRADE REVISION NIGHTS: Begin 3rd. November (See details in Newsletter) - \$2.00 per night.

HAMVENTION All aspects are under control at this stage.

**PLEASE GIVE TOM A CALL AND OFFER YOUR SERVICES IF YOU CAN
HELP ON OR BEFORE THE EVENT !**

GENERAL BUSINESS

- ♦ Financial Budget presented. Recommendations were presented and confirmed - DCS/CFH
- ♦ Newsletter Distribution - Spirited discussion on merits of various distribution methods to help reduce costs. Introduce Advertising (\$50 for 1/4 of A4 page), Sponsorships, Raffles, Donate a stamp!!!
- ♦ Ladies night - "Man O Man"?
- ♦ Scramble - Logs to be submitted on new Log sheets each 4 weeks.
- ♦ Membership being updated - Available to interested parties.
- ♦ Presentation to VK3NVZ - Next meeting.
- ♦ BBS. -Lengthy and spirited discussion resolved that BARG will not establish a BBS. Proposal to upgrade Digipeater VK3RPC and install links : Ballarat to Melbourne, Melbourne to Horsham. Approx cost of \$1800. Unanimously supported. CFH/CAZ
- ♦ Ken VK3IBM to be advised of decision and thanked for his past efforts.
- ♦ JOTA - 15/16th October. Ops.- DCS, CFH (Co-Ordinator), CCB.
- ♦ 5th. November - Car Sprint.

The meeting closed at 9.05pm.

Peter Hallgarten addressed the group on aspects concerning the discussions about the BBS situation. Peter was extremely well prepared and informed, and was able to address all of the queries put to him with constructive comments. Gordon VK3FGC thanked Peter for his attendance and advice.

NEXT MEETING - 28th. October.

73 de Geoff VK3ADB.

The Shack Bench

with REG VK3CAZ

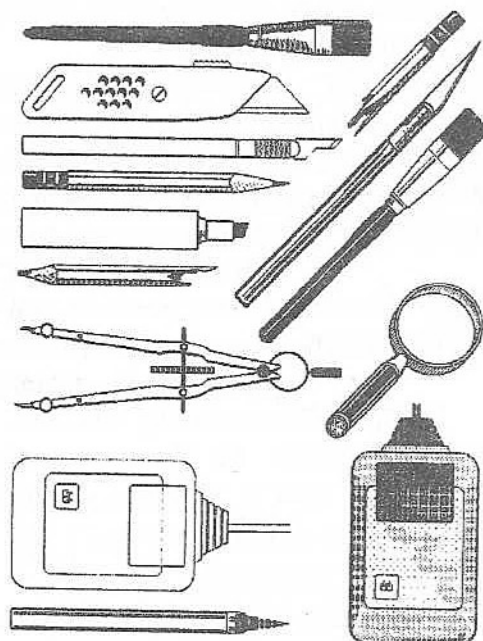


S.W.R. METER CALIBRATION

If you have had the misfortune to ruin the meter movement in your S.W.R. meter, or, maybe you've picked one up at a junk sale with an unserviceable or even a missing meter, then there is the problem of calibrating the unit once you have replaced the meter.

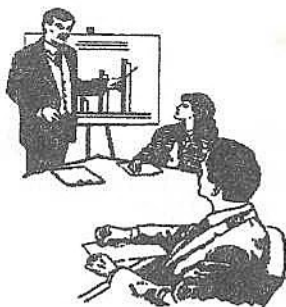
This table may be of considerable help in this process :-

'Reflected' meter Movement % of F.S.D.	S.W.R.
0	1.00 : 1
10	1.22 : 1
20	1.50 : 1
30	1.85 : 1
33.3	2.00 : 1
40	2.33 : 1
50	3.00 : 1
60	4.00 : 1
66.7	5.00 : 1
70	5.70 : 1
80	9.00 : 1
90	19.00 : 1
100	INF. : 1



So with a little 'white out', a black pen and a steady hand you can recalibrate the meter dial face
73 Reg.

UPGRADE CLASSES

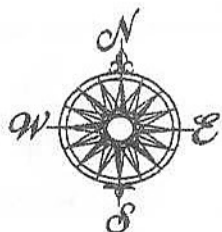


BARG will be conducting upgrade classes for those amateurs who wish to upgrade their Novice callsign to Full Call.

Classes start on Thursday the 3rd. of November and will be held weekly for 6 weeks. A charge of \$2.00 per night will be made to cover room hire etc.

If you wish to participate, please contact Tom VK3DMK without delay for details.

IMPORTANT: The reference book to be used is Swainston's Radio Theory Handbook for Amateur Operators Second Edition. If you do not have a copy they can be borrowed (\$10.00 deposit) from the Club Library. Syllabus: Week 1 - It will be assumed that you have read Chapters 2 to 8, Week 2 - 9 to 12, Week 3 - 13 to 15, Week 4 - 16 to 18, Week 5 - 20 to 23, Week 6 - Open Slather.



CONVERSATIONAL EXCURSIONS

OR "DX"

BY CLIFF
VK3CCB



The thrill of working a far-flung station within the frequency bands that are allocated to you is possibly one of the greatest lures and rewards of Amateur Radio.

One never becomes accustomed to working every corner of the globe. Just as your enthusiasm starts to sag because of poor band conditions, up comes Svalbard or Turkey to rejuvenate your zest for DXing.

When you look at the cover of the "International Listings" Call Book and you see that formidable figure of 655,246 Licenced Radio Amateurs, you may well consider the futility of competitively calling CQ DX using your meagre rig and that piece of wire draped from the chimney to the back fence, in an attempt to work that rare DX station. But all is not lost.

When plying my skills of a "DX Chaser" I join the ranks of the "Listener / Hunters". To be successful in working those rare stations I have learnt that I must first study their operating habits, and one of the major points is 'where are they listening?' Are they listening on their transmitting frequency or are they listening a little higher or lower, to avoid severe confusion of a "dog pile" - many stations calling on the same frequency at the same time (my wife thought it was a present left on the front lawn by the neighbour's dog.)

DXing is a most competitive sport, and is not for the timid operator. Don't let that put you off though, you never know your luck in the fervour of a dog pile, even when competing against the other guy's KW.

DXing can also lead to long-lasting friendships, and of course there is also the thrill of receiving some very nice Awards to grace the shack wall, not to mention the multitude of QSL cards.

If you wish to pit your skills with other DX operators, there is a number of ways to do this :-

- ♦ First of all - **Listen, Listen, Listen**, and pay close attention to comments of other DXers.
- ♦ Use information from magazine DX columns to find the frequencies where nets are held.
- ♦ Listen to these operators talking and make notes as to times, locations and frequencies where stations and countries are going to be active.
- ♦ Join in on the net and inform the net co-ordinator that you are new to the hobby, and you will be assured of receiving what help you require, not to mention a confidence build up.
- ♦ When trying to establish a contact with a rare DX station remember that good operating procedure and your credibility **DEMANDS** that you **MUST NEVER BREAK IN**, as it may deprive another operator of achieving his 'chance of a lifetime' in working that rare station, after patiently doing the 'right thing' for a considerable time. Remember "**DO UNTO OTHERS**"
- ♦ Never chat or pass pleasantries when working a DX station. Give only "His Call and Report" and be prepared to repeat it if asked to do so.
- ♦ Make sure your Log Book entry is correct so that the QSL card is correctly filled in (More on this at another time.)
- ♦ Always listen for QSL information, as most rare DX stations will repeat QSL information every ten minutes or so, and this can save you a lot of trouble.

Well that's all for now, I hope to have more for you next issue. 73 and Good DX Cliff.



CIRKIT - UK

David VK3YNB advises that he has in his possession a rather extensive catalogue of components available from the UK company CIRKIT.

If you are having trouble sourcing hard-to-get Inductors, Filters, Coils etc. David may be able to help with part numbers and Mail Order details from this company with which he has dealt successfully in the past.

COMING EVENTS

October 14	BARG Natter Night
October 15/16th.	J.O.T.A.
October 15	Mini Marathon
October 19	BARG Committee Meeting
October 28	BARG General Meeting
October 29 / 30	BARG Hamvention
November 3	Upgrade Classes Start.
November 5	Car Rally - "Sprint" (WICEN Event)
November 10	Upgrade Class - 2nd.Night.
November 11	BARG Natter Night
November 12	ALARA Contest
November 16	BARG Committee Meeting
November 17	Upgrade Class - 3rd.Night
November 24	Upgrade Class - 4th.Night
November 25	BARG General Meeting (Last for 1994)
December 9	BARG Natter Night (Last for 1994)



BLAST FROM THE PAST (JULY '55)

BALLARAT & DISTRICT RADIO SOCIETY

About 45 were present for the July meeting at which Mr. Jack Ibbot gave a talk and practical demonstration on 'binaural recording', the latest in Hi-Fi audio. Amongst this number were five from Geelong, including VK3IC and VK3ZBR, also VK3AGD, VK3AKR, VK3ZAZ and Tom Kinnersley from way down in the bush between Dunkeld and Westmere.

Although your scribe is a communications man, he, like all others, was astounded to say the least at the quality and type of audio which issues forth from the collection of tape decks, amplifiers, speakers, woofers, and tweeters. To quote the classics, it stood out like a shag on a rock when compared to what most people would assume was Hi-Fi. The most enjoyable evening for some decades now concluded with supper.

Activity in this town of about 30 licensed amateurs is still like 10 mx. - very dead. VK3HW & VK3AMH occasionally still take great delight in blasting a hole in 20 mx. complete with 'rock crusher' action to the annoyance of 30 SW Rx's and all the BC Rx's within the shock wave. Never the less, it delights the Ws from the East to the West coast.

(Edited from 'Amateur Radio' August 1955)

REMEMBERING ASH WEDNESDAY (Edited from BARG News Feb. '83)

It was with horror that we sat in front of our TV's last Wednesday and heard the news of the devastating fires raging in Victoria and South Australia. Never had we experienced anything so horrific as this. It went on all night and by morning things looked real crook. A call for help went out and by mid-morning Ham Operators were contacted to supply much needed communication links in the disaster areas. I rang Melbourne, lodging the equipment and manpower availability from BARG with the WICEN organisers. Dick VK3AEX rang me and asked me to organise the BARG members under the callsign of VK3BML, and a list of names was soon compiled using repeaters only, as phones were taxed beyond limits. Dick VK3VU went on top of Mt Buninyong and was in constant contact with Melbourne but nothing happened for a heck of a long time. We were all on our way to VK3AEX's QTH as he had taken over the organising for Ballarat, and then the call came. Two operators with HF and VHF mobile were needed in Winchelsea. As my car had HF and VHF installed, was fueled up and had all other necessary equipment on board, we took off like a bat out of hell to offer our help in the disaster. We were relieved in the mid-morning by VK3BNC and VK3KLZ who continued to work in Winchelsea all day Friday.

The reason for this article is to make all of us realise that disasters do happen and the question we must ask ourselves must be:- Are we as operators ready when something like this happens. I think that BARG did really well, but unfortunately not all operators had HF as well as VHF, you cannot rely on repeaters. The motto 'Be Prepared' seems a good one in this case, don't you think? 73 Hank VK3NIA



VK3DNA The "Genetic Fingerprint" Reports on his ROMp on CD



I had better introduce myself. My name is Danny. My callsign is DNA (as in 'genetic fingerprint') and I live in the Arctic Circle (otherwise commonly referred to as Ballarat). Having lived here for 30 years you would think that I would have acclimatised by now, but it's like eating ice cream - it's invariably COLD. Like most forward thinking hams nowadays I have become involved with computers, but only as a 'spare time' user, and I can tell you that you need a lot of spare time.

Although I have only had my PC for about 12 months I can recommend it as a great way to gain access to many of the technological aspects of our hobby, eg. Packet, SSTV, FAX, CW, Satellites - for those that don't like CW (yes I am having a shot at you Daryl), and the list keeps evolving with new modes all of the time.

Anyhow the main reason that I decided to put finger to keyboard was that I thought that some of you may be interested to read of my progress on my latest acquisition, a CD/ROM.

With the price of CD/ROM drives falling to a level that the home user can afford, I thought that I would go down that path (pun intended). The unit that I purchased came as the CD/ROM driver only. Don't forget, as I did, that if you are going to purchase such a unit that you will need to also obtain a 16 bit sound card as well. They sell for about \$200.00. You can get away with the conventional 9 bit card but it causes a lot of 'mucking about'. I can play music CDs at the moment, but most of the CD programs that are available are designed to talk to you (eg. Atlas's games etc.) and I cannot access the sound from them yet, but I can live with that for the time being.

Having been to a few computer swap meets of late, both in Ballarat and in Melbourne, I was surprised as to the quantity and quality of data available on CD/ROM. It is all still pretty pricey though. To give you an idea of the amount of data that can be stored on a CD disk, it is usually around 650 Meg. That is around about the equivalent of 464 of the conventional 3.5 floppy disks !!!

However there are some good buys about though. In a Melbourne CD distributor's catalogue I saw a listing for a "Ham Radio" CD for \$22.00. You would be hard pressed to acquire any CD at that price, no matter what category you were after. I purchased this disk by mail order, and it only cost \$3.00 for postage, so I was delighted when it arrived in a padded postage pack to boot. Most items that I have had to send by mail have cost me about \$10.00 minimum.

My report on this particular disk is that it is great value for money considering the amount of data on the disk, and quite a lot of it is shareware. One program on the disk is a CW program written by a Yank, and it is called 'Super Morse'. Having toyed with it for a while, like the saying goes, (it gets no better than this) it does everything. If only I had this program back when I was bringing my speed up to AOCP level it would have been a great help. But don't be fooled - there is no quick way of learning morse.

In conclusion I would like to give you something to think about:

In simple cases, where one obvious right way is opposed to one obvious wrong way, it is often wiser to choose the wrong way right off. This is one step ahead of choosing the right way, which turns out to be the wrong way, which has to become a right way (Did I miss something ??? Ed.).

73 de DANNY VK3DNA @ VK3IBM



PAGER INTERFERENCE (BY DAVID VK3YNB)



The way of reducing the 60dB over S9 noise caused by pagers, to a very low level, is to fit a trapped band-pass filter.

A two stage bandpass filter has a 40dB rejection, and three stages give a rejection of 55 dB.

In the VHF/UHF RSGB Handbook there are several designs for bandpass filters.

On page 7.1 - Fig 2 shows a four stage filter, while Fig 4 / Fig 6 shows a two stage filter.

The 60dB over S9 signals are reduced to a very low level with the squelch set a little higher.

The antenna must have maximum gain in the 144 MHz to 148 MHz area and very low gain at 148 MHz to 150 MHz. and of course the receiver must be well aligned for maximum rejection of the pager signals.

On the spectrum analyser there is no obvious radiation of interference when the two pager transmitters operate initially, however when they transmit the second time the analyser shows an interfering signal 4 MHz wide.

SUPERCONDUCTORS MOVE INTO MOBILES

An article in *New Scientist* by Charles Arthur reveals that high-temperature superconductors are moving out of the laboratory and into one of the fastest growing commercial sectors - mobile communications. A specialist American company, Illinois Superconductors, is fitting super - conducting band pass filters to four base stations run by the mobile phone company Ameritech.

Bandpass filters of the superconductor type are far more efficient than the conventional ones, and the potential American market for the new filters is estimated at \$6 billion annually.

The superconductors used in the Illinois filters are made using a technique developed by a team of researchers who began work with ICI. Bandpass filters must have a sharp response curve so that they allow only signals of a particular range of frequencies to pass through while rejecting others. But the electrical resistance of components in conventional bandpass filters makes the response curve 'bell shaped' allowing signals on nearby frequencies to be heard as noise, behind the main signal. The sharper the response curve, the better the filter's signal to noise ratio.

Superconductors eliminate resistance in the filter circuit, making the response curve much sharper.

For a filter made with conventional components Q is typically about 2500.

Illinois Superconductor's first generation of filters have a Q of 40,000 and the company has demonstrated a version with a Q of 1,000,000, said to create a 'brick wall of a filter'. The first generation of filters improves signal to noise ratios by 20 decibels.

The superconductors used to make the filters have a critical temperature of 77 kelvin, and are cooled by liquid nitrogen. They are made from yttrium, barium and copper oxide, a combination commonly referred to as YBCO. They could have used thallium instead of yttrium, because those components work well together at higher temperatures, but they become toxic and some of the properties at RF are not good.

High temperature superconductors have moved rapidly from their first demonstration in January 1986, to commercial use. Other companies are trying to develop them for use in power transmission, while some are already being used for military applications such as a sonar system now being tested for the US navy.

In May, Illinois Suprconductor was granted a patent on the thick-film technology used to make it's superconductors. It uses an 'ink' of superconductor mixed with a sort of paste, which can then be coated onto a three dimensional substrate. This can then be sintered and heated to give a

beautiful superconductor coverage over the whole shape. The substrate can be a cheap material such as stainless steel; thin film processes would have to use more expensive substrates. The result is that the production of the thick films is up to 1000 times cheaper than thin film techniques, and 10 times faster.

TUNE IN, DRIVE ON.

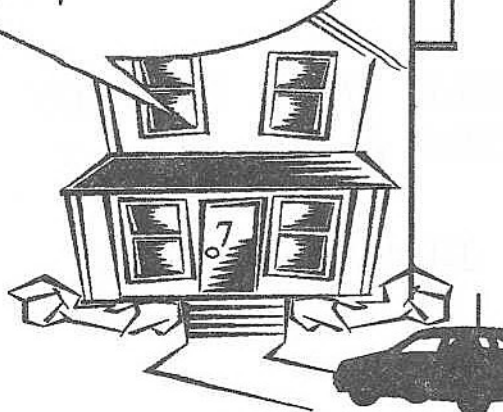
So many people have become addicted to TV, says Robert Grazebrook of Slough in British Patent Application 2 271 481, that there is a need for car radios that receive the sound from TV channels so that people can keep up with their favourite soap operas.

A loop aerial clamped to the inside of the car window feeds a TV tuner which filters out the video signal and leaves only the audio. The signal is amplified and fed to a relay which switches the car's existing loudspeaker between the existing radio and the new TV receiver. This makes TV sound reception possible without replacing the existing car stereo.

(Thanks to John VK3CFH for these two articles)

QRZ ?

CQ CQ, , HELP
J've *!!@# locked
myself in. HELP.



73 mate! I'm on me way. Maybe I can prise
open a window with me car jack, only I'm
B#2!!' *# 'd if I can find the bloody thing.

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